

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A displacement type expansion machine which is equipped with an expansion mechanism ~~(60, 130)~~ in which power is generated as a result of expansion of high-pressure fluid supplied to an expansion chamber ~~(62, 137)~~,

wherein:

a communicating passage ~~(72, 80, 140)~~, for establishing fluid communication from a fluid outflow side of said expansion chamber ~~(62, 137)~~ to an expansion-process intermediate position of said expansion chamber ~~(62, 137)~~, is provided, and

said communicating passage ~~(72, 80, 140)~~ is provided with an opening/closing mechanism ~~(73, 77, 87, 145)~~, and

said communicating passage communicates with said expansion chamber at a position immediately after the occurrence of overexpansion.

2. (Currently Amended) The displacement type expansion machine of claim 1, wherein said opening/closing mechanism ~~(73, 87, 145)~~ is formed by a check valve which permits fluid flow in a direction from the fluid outflow side of said expansion chamber ~~(62, 137)~~ towards the expansion-process intermediate position of said expansion chamber ~~(62, 137)~~, but prevents fluid flow in a direction from the expansion-process intermediate position of said expansion chamber ~~(62, 137)~~ toward the fluid outflow side of said expansion chamber ~~(62, 137)~~.

3. (Currently Amended) The displacement type expansion machine of claim 2, wherein said check valve ~~(73, 87, 145)~~ is formed by a spring return type check valve which is configured so as to enter the open state whenever fluid pressure at the expansion-process intermediate position of said expansion chamber ~~(62, 137)~~ falls below fluid pressure at the fluid outflow side of said expansion chamber ~~(62, 137)~~ by more than a predetermined amount.

4. (Withdrawn-(Currently Amended)) The displacement type expansion machine of claim 1, wherein said opening/closing mechanism ~~(77)~~ is formed by an electromagnetic valve which is configured so as to enter the open state whenever fluid pressure at the expansion-process intermediate position of said expansion chamber ~~(62)~~ falls below fluid pressure at the fluid outflow side of said expansion chamber ~~(62)~~ by more than a predetermined amount.

5. (Withdrawn-(Currently Amended)) The displacement type expansion machine of any one of claims 1-4, wherein said communicating passage ~~(80, 140)~~ is formed so as to extend through the inside of a constructional member ~~(61, 132)~~ which constitutes said expansion mechanism ~~(60, 130)~~.

6. (Currently Amended) The displacement type expansion machine of any one of claims 1-4, wherein said expansion mechanism ~~(60, 130)~~ is configured so as to perform an expansion stroke of a vapor compression refrigerating cycle.

7. (Withdrawn-(Currently Amended)) The displacement type expansion machine of any one of claims 1-4, wherein said expansion mechanism ~~(60, 130)~~ is configured so as to perform an expansion stroke of a vapor compression refrigerating cycle in which a high-level pressure becomes a supercritical pressure.

8. (Currently Amended) The displacement type expansion machine of any one of claims 1-4,
wherein:

said expansion mechanism ~~(60, 130)~~ is a rotary type expansion mechanism, and rotational power is recovered by expansion of fluid.

9. (Currently Amended) A fluid machine comprising a casing ~~(31, 101)~~ which houses therein a displacement type expansion machine ~~(60, 130)~~, an electric motor ~~(40,~~

~~110~~), and a compressor (~~50, 120~~) which compresses fluid by being activated by said displacement type expansion machine (~~60, 130~~) and said electric motor (~~40, 110~~),
wherein said displacement type expansion machine (~~60, 130~~) is formed by a displacement type expansion machine as set forth in claim 8.

10. (New) A displacement type expansion machine which is equipped with and expansion mechanism in which power is generated as a result of expansion of high-pressure fluid supplied to an expansion chamber,

wherein;

a communicating passage, for establishing fluid communication from a fluid outflow side of said expansion chamber to an expansion-process intermediate position of said expansion chamber, is provided,

said communicating passage is provided with an opening/closing mechanism, and

said communicating passage communicates with said expansion chamber at a first position where overexpansion can occur.

11. (New) A displacement type expansion machine which is equipped with an expansion mechanism in which power is generated as a result of expansion of high-pressured fluid supplied to an expansion chamber,

wherein;

a communicating passage, for establishing fluid communication from a fluid outflow side of said expansion chamber to an expansion-process intermediate position of said expansion chamber, is provided,

said communicating passage is provided with an opening/closing mechanism, and

said communicating passage communicates with said expansion chamber at a position of one-fourth of a suction/expansion process toward the direction of the expansion process from a position where the suction process in the suction/expansion process is completed.

12. (New) A displacement type expansion machine which is equipped with an expansion mechanism in which power is generated as a result of expansion of high-pressure fluid supplied to an expansion chamber,

wherein:

a communicating passage, for establishing fluid communication from a fluid outflow side of said expansion chamber to an expansion-process intermediate position of said expansion chamber, is provided,

said communicating passage is provided with an opening/closing mechanism, and

said communicating passage communicates with said expansion chamber at a position of one-fourth to three-eighth of a suction/expansion process toward the direction of the expansion process from a position where the suction process in the suction/expansion process is completed.